EdRugby Online Educational Resource

LESSON: Fit for Rugby – Nutrition

LEVEL Lower secondary

THEME: Game plan

DESCRIPTION:

Students explore the nutritional components of food. They investigate a range of nutrients, analyse their own diet and compare it to a typical training diet.

OUTCOMES:

This lesson contributes to the achievement of the following unit outcomes:

English

- With teacher guidance, identifies and discusses how linguistic structures and features work to shape readers' and viewers' understanding of texts.
- Uses writing to develop familiar ideas, events and information.
- Controls most distinguishing linguistic structures and features of basic text types such as stories, procedures, reports and arguments.

Health and Physical Education

- Discusses some physiological, social, cultural and community reasons for people's food choices.
- Identifies issues related to why individuals and groups in the same community may have different eating and meal patterns.

SUGGESTED TIME:

50 minutes

WHAT YOU NEED:

- class copies of student handouts (at the end of this lesson plan)
- food and nutrition books (optional)

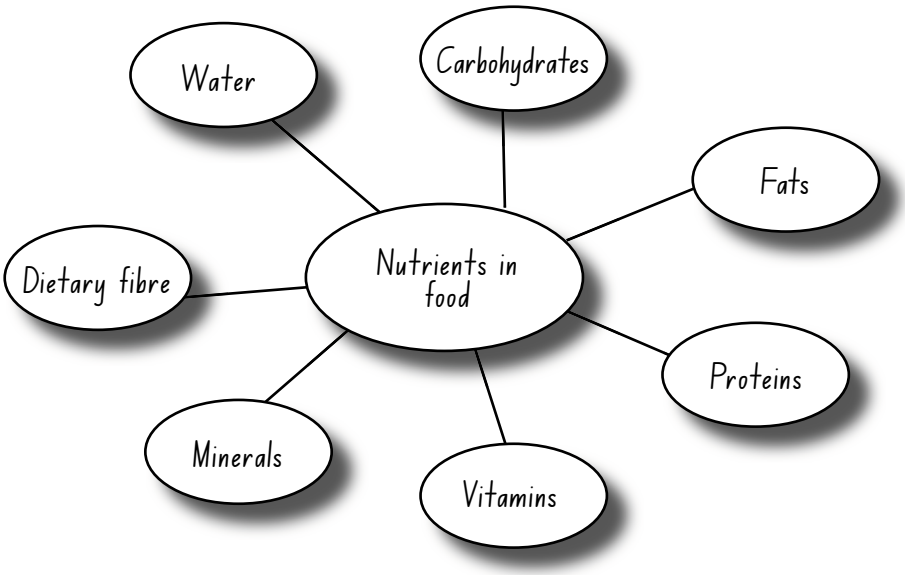
GAME PLAN

australian RUGBY

PART 1 WHAT'S IN FOOD?

a. Ask the class to think about the food we eat and the reasons why we eat it. Discuss the fact that food gives us energy for activity and helps us grow. Introduce the ideas behind metabolism and the links between a person's energy requirements, their physical activity and the amount of food they need each day. Point out that an inactive person will not require as much energy as a person who is more active. The higher the level of activity the greater the food intake to supply the energy required.

b. Explain that food is useful for our bodies because it contains nutrients. Ask the class if they know the names of the nutrients found in food. Brainstorm the nutrients found in food, using the diagram below as a guide:



c. Distribute Student handout – Nutrients. Work with the entire class to discuss each nutrient and the importance of each in a balanced diet. Discuss the energy requirements for playing Rugby and the link to certain food types. An example could be breakfast cereal (high in carbohydrates) providing energy for aerobic activity such as running in a game.

d. Distribute Student handout – Foods. Ask students to form small groups, with one set for each group.

e. Work with the students to explain, select and play one of the following games:

   – Play Snap or Memories to match names of nutrients with their description.

PART 2 FOOD DIARY

a. Distribute Student handout – Food diary. Work with the class to complete the table by writing in the names of all items of food eaten the previous day. Ask students to record these in the table, reminding them to include drinks such as water or cordial, and other items such as lollies.

b. Discuss student entries in their food diaries. Work your way around the class, asking each student to share a few of their food choices with the class. Ask the class to think about the food they have eaten and the nutrients contained in each.

c. Compile a class summary of the range of food items eaten, categorising them under the different ***nutrient*** headings.

d. If appropriate, extend the food diary over a week by making additional copies of the Student handout – Food diary.

PART 3 TRAINING DIET

a. Work with the students to explore the idea that people eat different types of food (ie have different diets) at different times for different purposes. Discuss the ideas behind eating different food during the morning, lunch and evening, as well as dietary changes which may occur during religious festivals and occasions. Introduce the idea that athletes in training may modify or change their diet to reach their peak performance.

b. Explain that Rugby players in training have high-energy requirements. This means they need to eat enough to keep up with the high levels of exercise and training required from the game. Outline rugby player's eating guidelines shown below:

Rugby Player's Eating Guidelines

- Eat more carbohydrates.
- Eat less fat.
- Eat enough protein.
- Eat more dietary fibre.

Ask students to think about how they would go about achieving these requirements in their own diet. Some suggested questions include:

Which food do you need to cut out?

Which specific food do you need to eat less of?

Which specific food do you need to eat more of?

Discuss the options for finding out more specific nutritional information about the food we eat, such as reading the labels, consulting a nutritionist, or referring to a diet manual or the Internet.

c. Distribute Student handout – Simon's training diet. Explain that Simon is a rugby player who is entering a period of heavy training and he and his coach have organised a suitable eating plan. Draw students' attention to the features of the training diet, including:

   – high amount of carbohydrates

   – low amount of fat

   – lots of hydration.

   Ask the class some questions about the training diet including:

   – Which foods are high in carbohydrates?

   – Which foods are low in fat?

   – What clues are there that the player is reducing fat from their diet?

   – Which items in the diet will keep the player hydrated?

d. Ask students to examine the training diet and compare it to their own personal food intake. Discuss any similarities and differences. Discuss the class diet as a whole and if it meets the requirements of the Rugby player's eating plan. Ask the class how they would need to modify their diet in order to meet the requirements of this diet.

PART 4 REFLECTION

Reflect on the nutritients found in food and how each is important. Discuss how each nutrient plays an important role in a balanced diet, and in specific diets such as a training diet for Rugby.

PART 5 EXTENSION

- Distribute the literacy activity at the end of this lesson.
- Explore aerobic and anaerobic activity. Which foods are better suited for fuel for these activities?
- Consider the idea that boys and girls need the same type of food. Find out more about the specific nutrient needs of males and females.
- Consider the idea that nutritional requirements change when a young person grows into an adolescent. Investigate this idea by using your library or the Internet.
- Begin a weekly or monthly food journal or diary, recording all the food eaten over that time. Combine with other students to create a class food diary and discover any patterns or trends.
- Find out more about rituals and customs associated with food. Do they differ from one family to the next?
- Compare your food diary to other people in your household. Compile a list of ways your diets are similar and ways they are different.
- Find a range of food advertisements in magazines and newspapers. Classify the ads into different groups such as age of the target audience.
- Discover more about customised diets, such as those for people with some forms of diabetes or heart disease.
- What does a weight lifter eat? Compile a list of sports and investigate the specific dietary requirements for each. Compare the requirements for a winger in Rugby, a gymnast and a weightlifter.
- Prepare some questions and interview an athlete about their eating plan.
- Create a poster showing all the food you ate yesterday (or last week, last year). Display it in the classroom with other students' posters.
- List examples of foods which are high in carbohydrates, fats, proteins. Design a poster showing different types of foods.
- Find out more about healthy eating and Australian nutritional guidelines.
- Find a nutritional pamphlet from a fast food outlet. Investigate the levels of carbohydrate, fat and protein in each item, and if they are suitable for an athlete in training.
- Design a poster with a phrase or heading such as "I eat too many…", "Our school canteen sells…" or "People should eat more…". Add lots of pictures of colourful food to your poster and display them around the school.

GAME PLAN

STUDENT HANDOUT NUTRIENTS

Carbohydrates

These are a type of fuel, providing the main source of energy for the body to perform activities including running and swimming.

Simple carbohydrates include sugar, complex carbohydrates include starches found in potatoes.

Fats

These provide energy in a concentrated form. They are not as effective as a fuel for muscular activity as carbohydrates are. Too much fat can lead to heart disease and obesity.

Proteins

These are important in building muscles and other body tissues including skin, hair and blood. Proteins are made of simple building blocks called amino acids.

Vitamins

These are important for everyday body functions. The body can store just a few vitamins (such as A, D, E, K). Other vitamins need to be replaced everyday (such as B group and C).

Minerals

These are important for everyday body functions including those related to building red blood cells, fluid balance, nerves, muscles and releasing energy. Important minerals include iron and calcium.

Dietary fibre

This isn't a nutrient, but is a component of food which is important to good health and maintaining regular body processes.

Water

Water takes an active part in many chemical reactions and is needed to carry other nutrients, to regulate body temperature and help eliminate wastes. Water makes up about 60% of an adults body weight.

GAME PLAN

STUDENT HANDOUT FOODS

Carbohydrates

Carbohydrate-rich foods include:

Bread
Pasta
Rice
Breakfast cereal
Biscuits
Soft drinks
Potatoes
Noodles
Couscous
Rice crackers

Fats

Fat-rich foods include:

Fried Chicken
French Fries
Potato Crisps
Chocolate
Nuts
Olives

Proteins

Protein-rich foods include:

Soy Beans
Milk
Beef
Chicken
Fish
Lentils
Nuts
Tofu
Soy Drink

Vitamins

Vitamin-rich foods include:

Fruit
Vegetables
Milk
Cheese
Meat
Eggs

Minerals

Mineral-rich foods include:

Milk
Cheese
Meat
Eggs

Dietary fibre

Dietary fibre-rich foods include:

Lentils
Kidney beans
Chickpeas
Vegetables
Fruit
Olives
Wholemeal bread
Rolled oats
Wholegrain
Breakfast cereal
Brown rice

Water

Water-rich foods include:

Watermelon
Milk
Fruit Juice

GAME PLAN

Day (circle one): Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Breakfast	Morning tea	Lunch	Afternoon snack	Dinner

Notes:

GAME PLAN

STUDENT HANDOUT SIMON'S TRAINING DIET

Breakfast	Morning tea	Lunch	Afternoon snack	Dinner
Items may include: fruit juice bowl of cereal with milk fresh fruit 2 slices wholemeal toast or muffins rice rolled oats noodle soup no margarine or butter	Items may include: fruit juice apple nuts yoghurt muesli bar rice crackers popcorn (no butter)	Items may include: 2-3 sandwiches (eg chicken and salad) soup and salad pasta with low-fat sauce banana omlette and toast fruit yoghurt wholemeal bread couscous soy drink milk drink	Items may include: water fruit juice muesli bar bread roll	Items may include: water cordial teriyaki chicken grilled fillet steak bbq fish pasta with low fat sauce stir fry beef with vegetables rice or noodles chicken skewers couscous Mexican burritos (low fat cheese)

Also includes sports drink, water or cordial after training.

STUDENT HANDOUT WORD PUZZLE

Nutrition

Unscramble each of the words in the list below. Copy the letters in the Rugby balls to the corresponding numbered boxes to form a phrase

AYROTBCDAERHS

TAF

RITPENO

FIERB

REWTA

MRLENSAI

VASTIMIN

RION

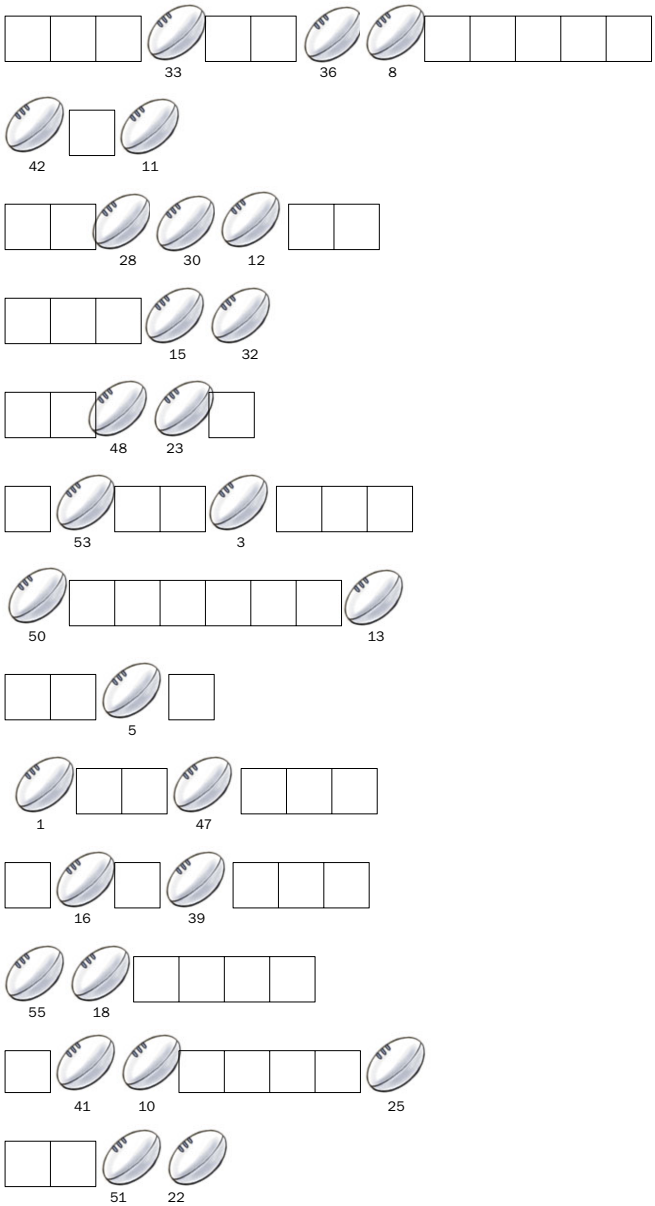
CAULICM

POMXELC

LEMISP

TRNIINAG

NISK



GAME PLAN

RIAH

6

BCLDO

4 38 34 19

NEGYRE

7

FLUE

27 21

GHTRWO

9 43 52

PAERIR

29 40 14 46 49 24

CESMUSL

45 20

RENVES

44 17 15

RYHNIDTAO

31 26 35 2 37

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48 49 50 51 52 53 54 55